

ABSTRACT OF THE DISCLOSURE

METHOD AND SYSTEM FOR SAFELY ARBITRATING  
DISK DRIVE OWNERSHIP

A data storage system. The system includes N servers, where  $N \geq 2$  and is an integer. The system includes D disks, where  $D \geq 2$  and is an integer. Each server is in communication with each disk. Each disk has a reserved disk block for each of the N servers. The system includes a disk arbitration mechanism that uses a timestamp-based voting algorithm over the disk blocks associated with the servers to exchange votes for a primary server to arbitrate access of the servers to a set of disks. Alternatively, each disk has a reserved disk block for each of the N servers. The system includes a disk arbitration mechanism where each of the N servers writes its state in its own associated disk block in each disk, and reads all the other servers' disk blocks in each disk in order to determine which server has access to, and use and control of the disks at a given time. A method for storing data.